Vermont Mental Health Performance Indicator Project

DDMHS, Weeks Building, 103 South Main Street, Waterbury, VT 05671-1601 (802-241-2638)

MEMORANDUM

TO: Vermont Mental Health Performance Indicator Project Advisory Group and Interested Parties

FROM: John Pandiani, Janet Bramley, and Alice Maynard

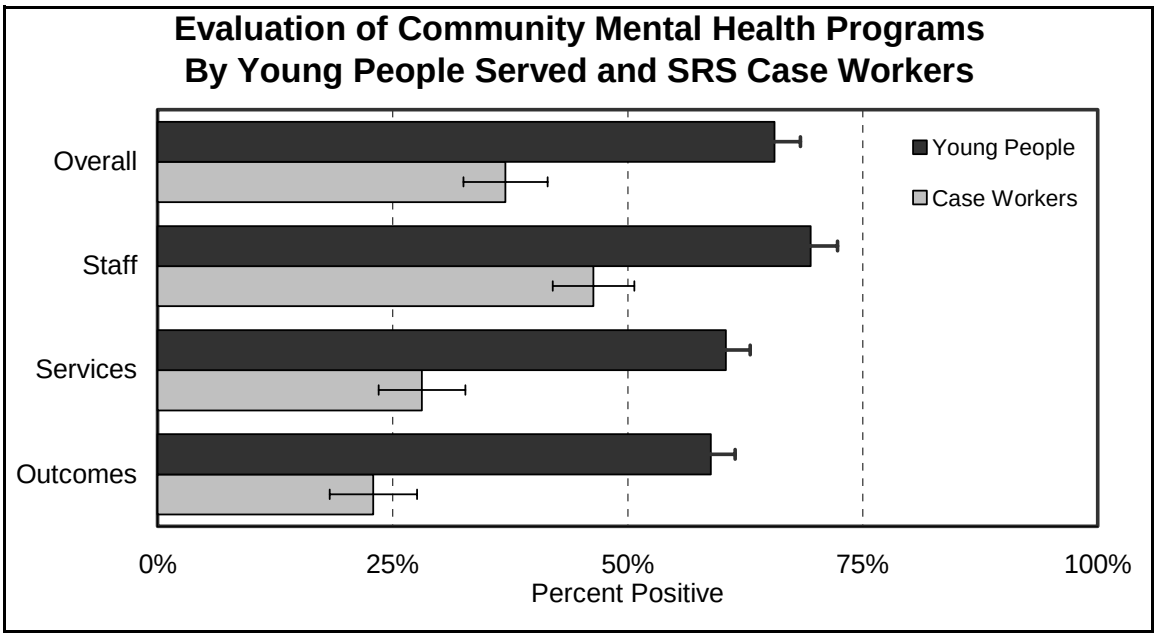
DATE: March 9, 2001

RE: Children's Mental Health Conference Presentation

A summary of the results of our surveys of youthful service recipients and SRS case workers was presented to the 14th Annual Research Conference on A System of Care for Children's Mental Health: Expanding the Research Base. A copy of the handout from this presentation is attached.

We look forward to your comments, questions, and suggestions for further analysis to jpandiani@ddmhs.state.vt.us, jbramley@ddmhs.state.vt.us, or amaynard@ddmhs.state.vt.us .

Evaluating and Researching Mental Health Programs from Different Points of View



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USF 14th Annual Research Conference
A System of Care for Children's Mental Health: Expanding the Research Base
February 25-28, 2001 Tampa Hyatt Regency - Tampa, Florida

This report is in response to advisory group recommendations regarding stakeholder satisfaction (available on line at www.state.vt.us/dmh/PIPs/pips.htm). The authors wish to thank Lisa Gilman, Kim Pandiani, Jolene Devenger, and the consumers and case workers who took time to evaluate and comment on the Child and Adolescent Mental Health Programs provided by the Community Mental Health Centers in Vermont.

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For detailed technical reports go to: http://www.state.vt.us/dmh/data.htm

Vermont's Department of Developmental and Mental Health Services values the concepts of accountability and continuous quality improvement. We define accountability as the achievement of specified outcomes within a set frame of values, all of which have been agreed upon through system-wide discussions over the past fifteen years. As part of this developmental process, we use the four quality domains proposed by the American College of Mental Health Administration (ACMHA) as the framework for our population specific outcomes. These four quality domains are: access to care, practice patterns, results of treatment, and administration/structure. In each of these domains, the Department's Child, Adolescent, and Family Unit (CAFU) has included several indicators of consumer, family, and stakeholder satisfaction.

To measure these indicators of satisfaction, CAFU has developed four surveys, one each for youth, child welfare/juvenile justice workers, school personnel, and parents. The process of constructing these surveys began with a review of the literature and discussions with CAFU staff and Research and Statistics staff. We asked parents in focus groups how they wanted us to define and measure satisfaction. We had discussions with survey committees working with the Sixteen State Performance Indicator Project because we want to be able to compare our results with other state systems. We had many discussions with our own CAFU staff and with the evaluation team with whom we contract through the University of Vermont. Lastly, we continue to refine the surveys as we learn from our results and from the feedback of others who read our results.

Why invest all this time, effort, and resources? CAFU needs and wants Vermont to have an effective and efficient system of care. It is clear from research and from clinical practice that it is imperative to build on the strengths of individuals and of systems and that it can save much wasted effort and resources to learn from each other's mistakes. It is clear from research on continuous quality improvement that feedback loops are fundamental; if a system is to improve, it must go to its consumers and stakeholders for their responses. Lastly, we need to prove to funders of the system that this system of care is a strong, strategic investment.

METHOD

The findings reported here are based on the analysis of responses to two mailed surveys. These include a survey of young people (aged 14 to 18), who had received services and a survey of the district office staff of Vermont's Department of Social and Rehabilitation Services (SRS), which is our child protection and juvenile justice agency. Both surveys were mailed to all potential respondents, rather than a sample, to provide adequate basis for comparing the performance of relatively small community programs. Both surveys included a single follow-up to non-respondents after about two weeks. Responses to the survey were confidential but the respondents were not anonymous. Each questionnaire included a clearly marked identification number that allowed research staff to link responses with information in other data bases and allowed program staff to follow-up if any problematical situations were indicated. Almost 30% of the young people served and more than 80% of the SRS case workers responded to the surveys.

Two techniques were applied to assure fair comparisons of the performance of different local agencies. The results of the surveys were statistically risk adjusted to account for differences in the caseloads of the agencies. Also, in order to provide appropriate confidence intervals for all measures derived from these surveys, a statistical finite population correction was applied to both surveys.

Risk Adjustment Based on Stratification and Weighting

Risk adjustment based on stratification and weighting statistically controls for differences in caseload among agencies when these differences are related to the outcome under examination. In Vermont, there are statistically significant differences among regional Child and Adolescent Mental Health Programs in the representation of young people in state custody and the representation of young people in different diagnostic categories. Custody and diagnosis were also significantly related to the ratings that service recipients gave to the community programs.

In order to compare the performance of Vermont's Child and Adolescent Mental Health Programs, each of six measures of consumer satisfaction were statistically adjusted to account for differences in the case-mix of the ten programs. This process involved three steps. First, client characteristics that were statistically related to variation in consumer evaluation of Child and Adolescent Mental Health Programs were identified. Second, statistically significant differences in the caseloads of the community programs were identified and compared to the variables that were related to variation in consumer ratings of program

performance. Finally, variables that were statistically related to both response rates and satisfaction with services were used to adjust the raw measures of satisfaction for each community program. All available client characteristics were tested; those found to be statistically related to response rate and satisfaction were age (14-16/16-18), state custody (yes/no), and diagnoses (yes/no) of affective disorder, adjustment disorder and attention deficit and hyperactivity disorder. The resulting risk adjusted outcome measure is a fairer measure of program performance because it controls for differences in the caseload of the different programs. The procedure used in this risk adjustment is described by the following formula:

$$\sum w_i r_i$$

where: "w_i" is the proportion of the statewide caseload who fall in group "*i*", and "r_i" is the rating the respondents in group "*i*" gave to the community mental health program.

Finite Population Correction

Evaluation surveys that are intended to collect information from a finite number of people can achieve a variety of response rates. For instance, just under 30% of all consumers and more than 80% of all SRS case workers responded to this survey. When responses are received from a substantial proportion of all potential subjects, standard techniques for determining confidence intervals overstate the uncertainty of the results. Standard procedures for deriving 95% confidence intervals for survey results assume an infinite population represented by a small number of observations. This confidence interval is derived by multiplying the standard error of the mean for the sample by 1.96.

In order to correct this confidence interval for studies in which a substantial proportion of all potential respondents is represented, a "finite population correction" can be added to the computation. The corrected confidence interval is derived by multiplying the uncorrected confidence interval by $\sqrt{1 - n/N}$, where *n* is the number of observations and *N* is the total population under examination. The statistical significance of all findings in the body of this report have been computed using this finite population correction.

FINDINGS FOR PROGRAM EVALUATION

Survey of Young People

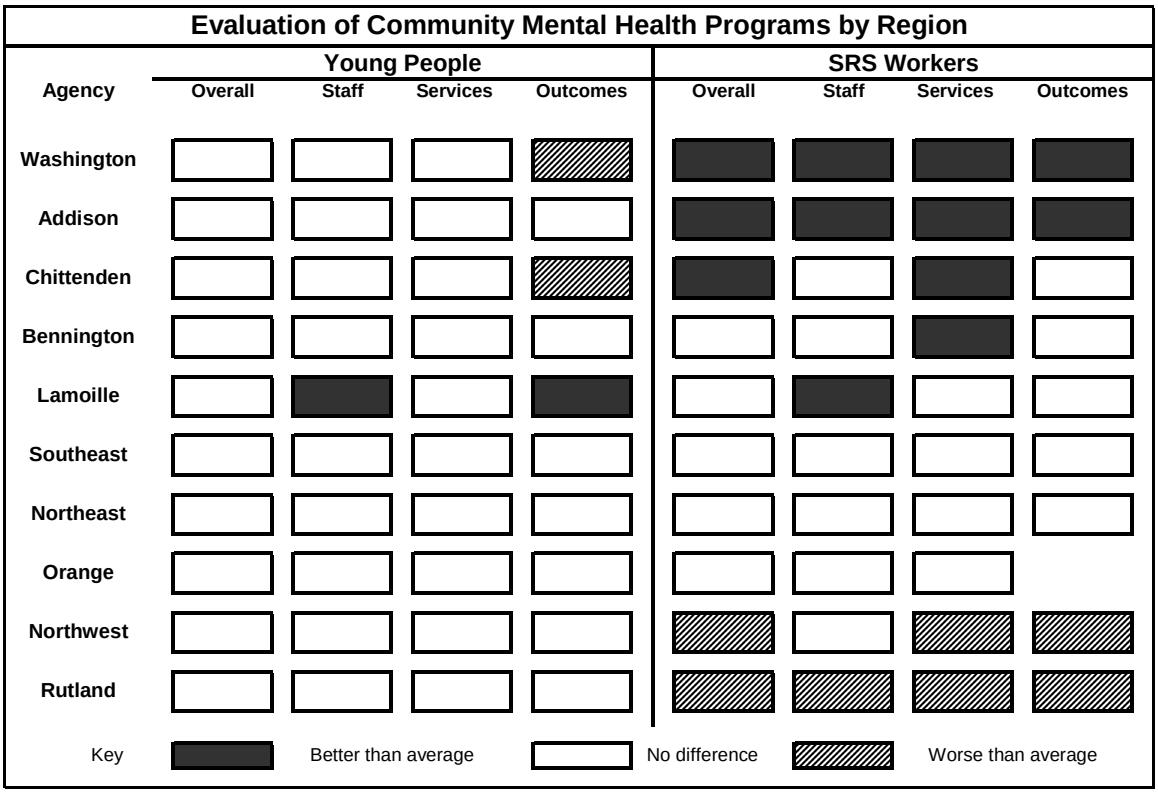
The majority of young people served by Child and Adolescent Mental Health Programs at Community Mental Health Centers in Vermont rated their programs favorably. The most favorably rated items were "The staff listened to what I had to say" (77% positive) and "I liked the staff who worked with me" (76%). Other favorably rated aspects of care included the convenience of the location of services (72%), and two items relating to respect from staff (72% each). Sixty-six percent of the young people agreed or strongly agreed that "The services I received were helpful to me."

The least favorably rated items related to the amount of services received and involvement in choice of services. Forty percent indicated that they did not receive more services than they wanted and 46% did not want more services than they got. Only 50% felt that they helped to choose their services.

There were significant differences in young people's ratings of Child and Adolescent Mental Health Programs on the four scales derived from responses to the Vermont survey. More than 66% of consumers rated programs favorably *overall,* and the *staff* scale received significantly more favorable responses than the *outcomes* scale (70% vs. 59% favorable).

In order to compare young people's evaluations of Child and Adolescent Mental Health Programs in the ten Community Mental Health Centers, young people's ratings of individual programs on each of the four composite scales were compared to the statewide average for each scale. The results of this survey indicate that there were significant differences in consumers' evaluations of some of the state's ten Child and Adolescent Community Mental Health Programs.

The Child and Adolescent Mental Health Program in Lamoille County received the most favorable consumer assessment in the state, scoring better than the statewide average on two of the four scales. The Child and Adolescent Mental Health Programs in Bennington and Southeast each scored better than average on one of the four scales. Young people's evaluations of five of the other programs were not statistically different from the statewide average on any of the scales. The Child and Adolescent Mental Health Programs in Washington County and Chittenden County were rated below the statewide average on one scale and the program in Chittenden County below on one scale.



Survey of Case Workers

The SRS case workers evaluating Child and Adolescent Mental Health Programs at different Community Mental Health Centers in Vermont had widely differing opinions of their local programs. The three most favorably rated items related to staff, where the SRS workers reported "I like the staff who work with me" (81%), "The staff listen to what I have to say" (75%) and "I feel respected by the staff" (72%). Sixty-eight percent of the SRS case workers agreed or strongly agreed that "The services …are helpful." The least favorably rated item related to the capacity to provide the services needed. Only 17% of the SRS workers felt that their local Community Mental Health Center had "…adequate capacity to serve children and families I refer to them". They also gave low ratings to items relating to the outcomes of the children as a result of the mental health services received. None of the outcome items received more than 24% positive ratings, the lowest being only 20% of case workers reporting their clients' "…family life improved".

There were significant differences in SRS case workers' ratings of Child and Adolescent Mental Health Programs on the four scales derived from responses to the Vermont survey. Thirty-seven percent of the respondents rated programs favorably on the *overall* scale, and the *staff* scale received significantly more favorable responses (46% favorable) than the *services* and *outcomes* scales (28% and 23% favorable).

In order to compare case worker evaluations of Child and Adolescent Mental Health Programs in the ten Community Mental Health Centers, ratings of individual programs on each of the four composite scales were compared to the statewide average for each scale. These comparisons showed considerably more variation between ratings of providers than the youth survey. The Child and Adolescent Mental Health Programs at Washington and Addison County were the most favorably rated with scores higher than the statewide average on all four scales. The program in Chittenden was rated better on two of the four scales and the programs in Bennington and Lamoille better on one scale. Programs at Northeast and Southeast regions were rated no differently than the statewide average on any of the scales. Orange was rated lower than the statewide average on one scale, Northwest lower on three scales, and Rutland had the least favorable ratings with scores lower on all four scales.

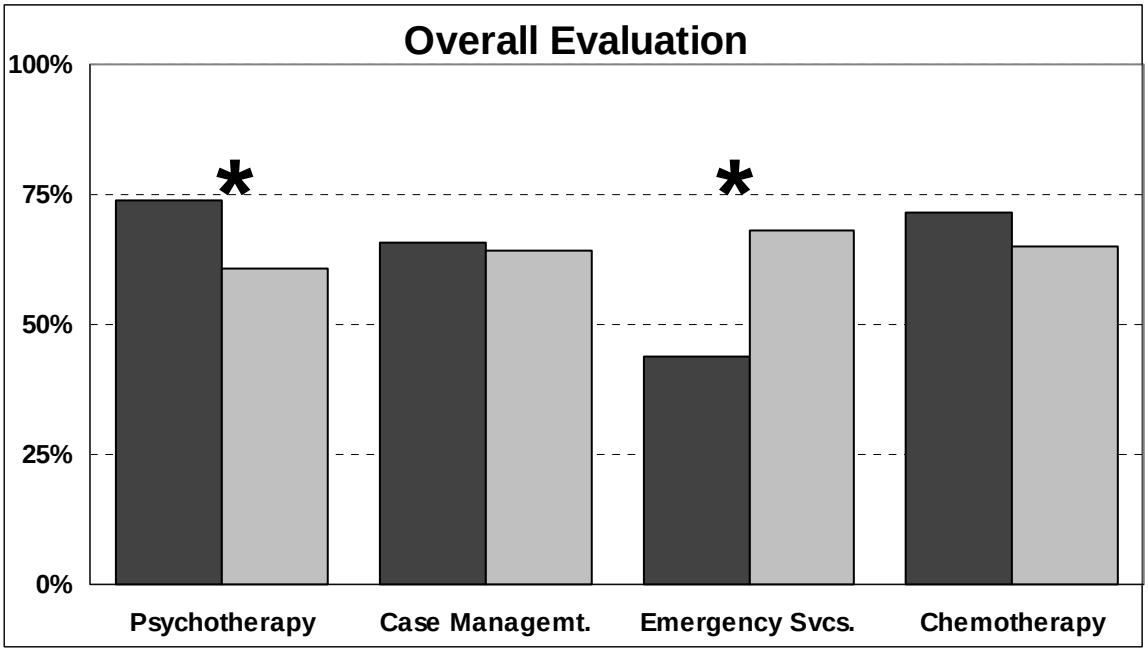
FINDINGS FOR SERVICES RESEARCH

Services Received and Assessment of Services by Young People

The relationship between types of services provided to children and adolescents and various measures of treatment outcomes is one of the basic issues in mental health services research. As the responses to the Vermont youth survey were linked to detailed information on the clients served (age, gender, diagnosis, etc.) and information on the type and amount of service they received, the data that were originally collected for purposes of program evaluation can be used to address a wide range of services research questions. One of the issues addressed was the relationship between the type(s) of service received by individual respondents and their evaluation of the agencies providing those services.

For this analysis four broad categories of service were identified for examination: psychotherapy, case management, emergency services, and chemotherapy. Information on services received in the six months before the survey was obtained from computerized Monthly Service Reports submitted to the state mental health agency by community providers. As the source data for these reports are also used for third party billing and local management purposes, and subject to periodic outside audits, we have substantial confidence in their accuracy and completeness. Based on the information in this services data set, each respondent was identified as having received or not received each of the four types of service. When the four assessment scale scores for young people who had received each type of service were compared with the scale scores for those who had not, clear patterns of difference (or lack thereof) emerged. First, there were no statistically significant differences, on any of the four scales, in assessment of local program performance between young people who had received case management services and those who had not. Likewise, there were no differences, on any of the four scales, in assessment of local program performance between young people who had received medication services and those who had not. There were, however, statistically significant differences between young people who had received psychotherapy services and those who had not on three of the four scales, and there were statistically significant differences on all four scales between young people who had received emergency services and those who had not.

Young people who had received psychotherapy services rated the programs significantly higher on the overall, service quality, and outcomes scales than those who had not received psychotherapy services. Young people who had received emergency services rated the programs significantly lower on all four scales than those who had not received emergency services.

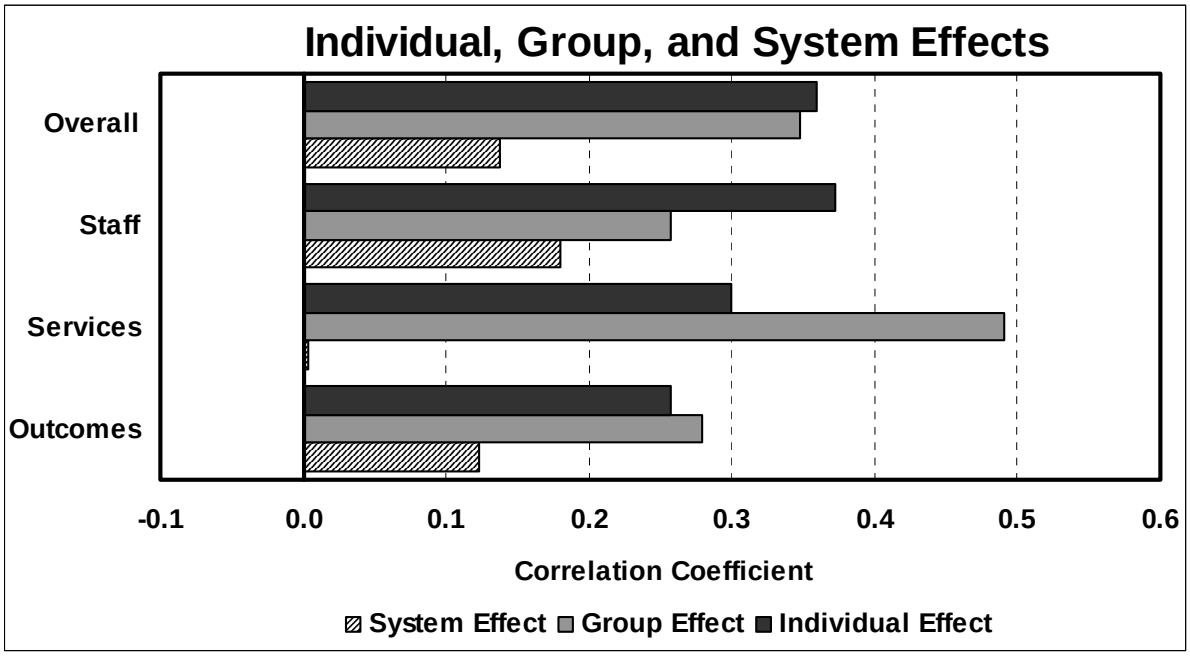


Caseload Integration and Assessment of Services by SRS Workers

The relationship between levels of service system integration and various measures of treatment outcomes is another basic issue in mental health services research. This project measured service system integration by looking at levels of caseload integration in three ways. First, caseload integration was measured at the individual person level on the basis of each SRS workers response to the question "… how many of your clients received services from (specified CMHC)?". Second, caseload integration was measured at the group level on the basis of the proportion of all young people on the SRS caseload who were also on the caseload of the local CMHC. Finally, caseload integration was measured on the basis of the Caseload Segregation/Integration Ratio (C-SIR). C-SIR measures the degree of caseload sharing among multiple agencies (in this case, mental health, SRS, and Special Education). These last two measures were derived by applying the method of Probabilistic Population Estimation of caseload overlap to anonymous data sets obtained from each of the three service sectors. Each of these three measures was correlated with the four scale scores to determine the relative effect of each measure of caseload integration on the assessment of the local community mental health program.

The results of this analysis indicate that caseworkers assessments of local community mental health programs were correlated with measures of caseload integration at all three levels. At the individual level, the proportion of each SRS worker's caseload who were also on the local mental health center caseload was positively correlated with each of the four scale scores (r = .26 - .36). At the group level, the proportion of each region's SRS caseload who were also on the local mental health center caseload was also positively correlated with each of the four scale scores (r = .26 - .49). Finally, at the service system level, the overall integration among mental heath, SRS, and Special Education (EBD) caseloads was positively correlated with three of the four scales (r = .12 - .18).

We believe the results of these two surveys provide an important contribution to the body of knowledge in children's mental health services research in addition to providing a valuable contribution to program evaluation and continuing quality improvement at the state and local level.



DISTRIBUTION, RESPONSE, AND NEXT STEPS

Distribution

Reporting on the youth survey is complete. We shared the draft report with various groups, including mental health providers, state level advisory groups, and the State Interagency Team and clarified the content based on their questions and comments. We mailed an Executive Summary with summary data to survey respondents who requested it. This included response rates for each provider and a one-page summary of item by item scores for each provider. A full technical report was mailed to interested parties and posted on the Department's website. This process for the SRS survey is almost complete.

Reactions

Only one Director of Children's Services reacted negatively to the Youth survey findings. This resulted in extensive discussions after the initial presentation, a letter of complaint to the Department's Commissioner criticizing the survey and the published results, and a response from the Commissioner defending both. All the other providers, including those with more negative results, were willing to learn from the consumer responses. As increasingly sophisticated users of data, they also observed that data often reveal as much about the respondent as about the subject. (How many adolescents are happy with the adults in their lives, let alone adolescents with severe difficulties?) They are interested to see if findings are similar across the various perspectives in the four surveys. Our State's Division Director for child welfare admired our courage in presenting the results, offered advice on how to present negative findings to the legislature, and noted the consistency between our data and anecdotal information he had received.

Uses

The uses of the survey results make the work worthwhile. Within the framework of continuous quality improvement, CAFU staff review the data for strengths and areas of concern. Our results have already led to technical assistance for one agency, leading to changes in their staffing pattern. The survey findings also help to focus the conversation and reinforce the importance of action to improve the results. Another Director of Children's Services noting his agency's poor performance in one area sought technical assistance from another Director in a region, which was doing well. Mentoring rather than cut-throat competition can be fostered with a continuous quality improvement philosophy. Lastly, this data is being used in our formal processes of program review and agency designation.

Next Steps

We plan to complete the series of four surveys within a three-year period and then begin the next three-year cycle. We will continue our conversations among department staff, consumers and family members, and other stakeholders about what the data means and how to improve. We will continue to refine the surveys to give us useful data to help determine which parts of our system of care are effective and efficient and how we compare nationally to other systems. We will encourage the honest sharing of information about what works and what doesn't to continuously improve our system of care. Finally, we will ask funders to invest in this system so that we can more effectively and efficiently meet the needs of children and families.

CHILD, ADOLESCENT, AND FAMILY MENTAL HEALTH QUALITY DOMAINS

Access *Core services are available to children and families in need.*	**What we want to achieve.** • Core services are provided • Consumer satisfaction with availability of services • Stakeholder satisfaction with availability of services • Utilization by children and families in need • Sound fiscal resources • Core capacity guidelines apparent in agency practice
Practice Patterns *Services provided are appropriate, of high quality, and reflect current best practices.*	**What we want to achieve.** • Core services are provided • Consumer satisfaction with services received • Consumer satisfaction with clinical staff • Consumer satisfaction with agency environment • Stakeholder belief in quality of services • Integration of youth in home, school, and community • Availability of staff • Core capacity guidelines apparent in agency practice
Outcomes/ Results of Treatment *The quality of life for consumers will improve.*	**What we want to achieve.** • Consumer satisfaction with results of services • Stakeholder satisfaction with results of services • Level of adjustment (behavior) of youth served improves • Level of functioning (symptoms) of youth served improves • Hospitalization for behavioral health care is minimized • Maternity w/ TANF involvement of youth served declines/Paternity • Integration of youth in home, school, and community • Core capacity guidelines apparent in agency practice
Structure/ Administration *D.A.s will be fully functional, and have strong working relationships with DDMHS, families, and other stakeholders.*	**What we want to achieve.** • Financial solvency • Financial efficiency • Consumer involvement • Consumer satisfaction with agency processes • Stakeholder linkages • Core capacity guidelines apparent in agency practice

Related Readings

A Longitudinal Evaluation of A System of Care for Children and Adolescents With A Severe Emotional Disturbance. *Evaluation and Program Planning*, 19 (4). 1996. (Pandiani, JA, Schacht, LM and Banks SM)

An Assessment of Parent Involvement in Local Interagency Teams. *Journal of Child and Family Studies*. 1996. (Schacht, LM, Pandiani JA, and Maynard A)

Caseload Segregation/Integration: A measure of Shared Responsibility for Children and Adolescents. *Journal of Emotional and Behavioral Disorders* 7 (22), 65-128. 1999 (Pandiani JA, Banks SM, and Schacht LM)

Causes and Consequences of Caseload Segregation/Integration. The 12th Annual Conference on A System of Care for Children's Mental Health. Tampa, FL, February 1999.

Evaluation of Child and Adolescent Mental Health Programs by Young People Served in Vermont January – June 1999: Technical Report. Vermont Department of Developmental and Mental Health Services. August 30, 2000. (Bramley JA, Pandiani JA, and Banks SM)
www.state.vt.us/dmh/PIPs/99kidstechnicalreport.pdf

Evaluation of Child and Adolescent Mental Health Programs by Social and Rehabilitation Services Case Workers in Vermont: Technical Report. Vermont Department of Developmental and Mental Health Services. February 14, 2001. (Bramley JA, Pandiani JA, and Banks SM)
www.state.vt.us/dmh/PIPs/00srstechnicalreport.pdf

Mathematical Modeling of Movement between Residential Placements: A Systems Analytic Approach to Understanding Systems of Care. *Journal of Child and Family Studies*. 1994 (Pandiani JA, Maynard A, and Schacht LM)

Measuring Wraparound in Practice: How Closely it Adheres to Wraparound Principles and How it Differs from Traditional Approaches to Serving Youth with Severe Emotional and Behavioral Challenges. 1999. Doctoral Dissertation, University of Vermont, 1999. (Bramley J).

Mental Health Services in Vermont Schools 1996-1997: Technical Report. Vermont Department of Developmental and Mental Health Services. September 2, 1997. (Pandiani JA, and James B)

Personal Privacy vs. Public Accountability: A Technological Solution to an Ethical Dilemma. *Journal of Behavioral Health Services and Research*. 25 (4), 456-463. 1998. (Pandiani JA, Banks SM, and Schacht LM)

Using Incarceration Rates to Measure Mental Health Program Performance. *Journal of Behavioral Health Services and Research*. 25 (3), 300-311. 1998. (Pandiani JA, Banks SM, and Schacht LM)

Vermont's Local Interagency Teams: An Evaluation of Service Coordination and System Change. *Community Alternatives: An International Journal of Family Care*. 5 (1). 1993 (Pandiani JA and Maynard A

Vermont Public School and Community Mental Health Service Integration, Satisfaction, and Needs Assessment 1993-1994: Technical Report. Vermont Department of Developmental and Mental Health Services. September 14, 1994. (Pandiani JA, Turbitt E, and Braner M)